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BIOTIN

The extensive investigations of Kögl *et al.* which culminated in the isolation of crystalline biotin[1] resulted in widespread interest in this compound. Its wide distribution in nature and its extremely high physiological activity (one of the most potent known) suggest that biotin may play an important role in cell physiology. This is indicated by the recent work of Gyorgy, Melville, Burk, and du Vigneaud[2] who demonstrated that biotin and vitamin H (curative factor for egg-white injury) "are either identical or indeed closely related compounds." In addition, biotin has been reported[3, 4] as essential for growth of certain *Clostridia*.

A concentrate exhibiting biotin and vitamin H activity, prepared in our laboratories, is now available to investigators at nominal cost. Further information regarding this concentrate and other nutritional biochemicals gladly sent upon request.

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RESEARCH LABORATORIES

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418-O CHAGRIN FALLS, OHIO

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INTRODUCTORY GUIDE TO THE INDEXES

Users of Biological Abstracts are reminded that this volume covers only a part of the literature published in the period during which the volume was issued. Succeeding volumes must therefore also be consulted for literature more or less contemporaneous with that reported and indexed in this volume.

SUBJECT AND SYSTEMATIC INDEXES

GENERAL

These indexes are designed to meet the needs both of those whose interests lie chiefly in systematic groups of organisms and of those whose interests are not circumscribed in this way. For the former, chiefly systematic biologists, one of the requisite avenues of approach to their subject is by systematic groups; this is provided by the systematic index. Experience has shown that the needs of those concerned with other biological disciplines are most practically met by a detailed analytical subject index alphabetically arranged; an extensive index of this type is therefore provided.

A special effort has been made to design these two indexes as far as possible in such a way that they will complement rather than duplicate each other. Certain departures from standard indexes will therefore be noted. Chief among these is the policy in the systematic index of carrying the indexing only to genera, not to species.

This arrangement will be convenient for systematists as well, especially when seeking information concerning a limited number of given genera; under these circumstances the subject index will be found the more satisfactory, making consultation of the systematic index in such cases unnecessary. When, however, more comprehensive and extended systematic orientation is desired, the systematic index provides a complete condensed approach by groups and their subgroups down to and including genera.

THE SUBJECT INDEX

(p. 1894 to end)

This index is based upon an analysis of the abstract, not merely the title.

The words, terms, and expressions currently used for the same or closely related subjects vary greatly. If the indexing is done according to the particular words used by authors, much scattering of material concerning the same subject obviously results. Therefore the effort has been to index subjects and not merely words, and, where necessary, provide cross references which will lead the user from words commonly used to the rubrics under which the pertinent material has been assembled. Thus, studies on blood sugar are indexed under that rubric, not under "Hypoglycemia," "Hyperglycemia," or other terms used by authors to denote variations in blood sugar; because of their frequent use, however, "Hypoglycemia," "Hyperglycemia," etc., are entered in their respective alphabetic positions with cross references to "Blood sugar." Similarly, word indexing frequently scatters material referring to the same species; thus, material concerning the domestic fowl would appear under such diverse rubrics as hen, cock, pullet, capon, fowl, chicken, chick, etc.

While an effort has been made through subject indexing to avoid in a large measure the scattering resulting from word indexing, the index is, in the main, not a classified one. Since ease of use rather than strict logic is demanded of an index, the indexing so far as possible is done under the rubrics under which it is thought the majority of users are most likely to search. To this extent the index is frankly opportunistic. Thus the index contains rubrics for "Antibodies," "Antigens," "Complement," "Toxins," "Vaccines," etc., instead of relegating all to subordinate positions under some general rubric, *e.g.*, "Immunity." Since individual researches tend to be highly specialized, this general policy is believed to result usually in greater convenience to investigators.

This policy necessarily places closely related subjects in more or less widely separated alphabetical positions, and since the index should be useful not only to the specialist but also to those who wish a more comprehensive orientation in a wider field, cross references have been liberally employed to lead users to related material. Also, when the nature of the material has made it possible, the information has not only been entered under, for instance, the specific name of the substance, but has been listed again under the class or group to which it belongs. For example, the papers which deal with cyanides as fumigants appear with detailed entries under "Cyanides," as: "Cyanides, as fumigants, in black scale control, ... 14980," and are listed again, by number only, under "Fumigants," as: "Fumigants, cyanides as, ... 14980." Similarly, papers on specific stains are entered in detail under the name of the stain, *e.g.*, "Methylene blue," etc., and listed again by number only under "Stains." Cyanides and methylene blue cannot, however, be made exclusively subrubrics of "Fumigants" and "Stains," respectively, because of their importance in other directions.

There are some cases, however, in which there seems to be no necessity for thus scattering related material; especially in cases where there is an anatomical basis for grouping, material has been entered only under the larger group heading. Thus the bones, muscles, nerves, and the various parts of the brain are listed under "Bone," "Muscle," "Nerve," "Brain," rather than under "Ulna," "Sartorius," "Phrenic," "Amygdala," "Restiform body," etc.

Under very broad rubrics only those papers are in general indexed which themselves are broad in content or point of view. Thus, under "Physiology," "Pathology," "Cytology," "Horticulture," "Ecology," etc., will usually be found indexed only books or other general treatments; to do otherwise would make these headings unwieldy and more or less coextensive with the corresponding abstract sections.

Indexing under names of organisms

In general, indexing is done under the scientific name used in the original; *i.e.*, no attempt is made to select the name that might be considered correct under the rules where two or more names are in current use. This results in some scattering of references pertaining to the same organism, notably among bacteria, where several systems of nomenclature are current. However, specialists will know what names to consult in such cases; also, a limited amount of cross referencing is provided.

When common names only are used in the original, the indexing as a rule is done under these; allocation to genera would in many cases be difficult and introduce errors. Thus, if merely "Clover" appears in the original, it

is indexed under that name rather than under the genus *Trifolium*, since the plant in question may belong to some other of the several genera members of which are known as "Clovers." Where, however, there is no room for doubt as to the proper scientific name of an organism or group mentioned only by common name in the original, indexing may be done under the scientific name. Between common names and their possible, probable, or certain corresponding generic names, cross references have been provided in a limited number of cases.

Since the same generic name is sometimes used for both plants and animals, the alphabetical arrangement used in the subject index throws these together. In most cases these have been separated. Occasionally, however, the species listed under a generic name will be in part animal and in part plant; reference to the corresponding abstracts at once distinguishes between them.

Studies, especially experimental, on common laboratory animals (guinea pig, mouse, rat, rabbit, dog, cat, etc.) are in general not indexed under the name of the animal; the same applies to man, especially in the fields of physiology, pathology, and anatomy.

In view of the extensive systematic index, the indexing in the subject index is usually not done under group names above the rank of genus. Occasionally it appears desirable to insert references under larger group names, often in anglicized form, *e.g.*, "Diatoms," "Fishes," etc. However, every supergeneric group recognized and represented in the systematic index appears in the subject index in Roman type; the page number following refers to the page of the systematic index on which the group is treated, and the exponential figure attached to the page number refers to the column.

Similarly, the page and column references appearing after generic names refer to the exact places in the systematic index where these genera are treated systematically. *It is thus possible to determine instantly the classification of any genus occurring in the alphabetical subject index which appears also in the systematic index.* For example, the genus *Anopheles* in the alphabetic subject index is followed by "(p. 1877[2])"; reference to this page and column in the systematic index discloses that the genus falls in the family Culicidae, order Diptera, class Insecta.

Through the policies outlined in the two paragraphs preceding it is apparent that *the subject index provides at the same time a complete alphabetical index to the systematic index.* It is thus possible for users of the alphabetical subject index to orient themselves systematically as to both genera and supergeneric groups, thereby facilitating the utilization of systematic information—especially by those who find it difficult to do so when only a systematic approach is available. Furthermore, the user is at once put in touch with related genera and groups and the information recorded concerning them, thereby simplifying the problem of approaching a special problem against a background of broad orientation.

Typography

All generic names are in *italic type* (the only exceptions are new genera and subgenera, which appear in bold-faced capitals); all other first words in rubrics are in ordinary Roman type. This will be found convenient: if the search is for a generic name, all roman type rubrics can be ignored; if the search is for any other subject rubric, all italic names can be passed by automatically.

New genera and subgenera are printed in bold-faced capitals, *e.g.*, **ARENIGOBIUS**. Categories below the rank of genus are not indexed in first position, the sole exception being new subgenera.

For reasons of economy the indexing of new taxonomic units below the rank of genus has been greatly curtailed. We have endeavored to lead the user to the desired information in the abstract without duplicating that information in the indexes. Only a few of the new species, varieties, forms, combinations, and reductions to synonymy have been mentioned specifically in the index. If mentioned they are printed as follows:

New species, varieties, etc., appear in lower-case bold-faced type, *e.g.*, *Anopheles* **broussesi**, *Carex capillaris* v. **parvirostris**.

New specific, varietal, etc., names proposed to replace preoccupied names are printed in lower-case bold-faced type, with the replaced combination following in parentheses and in italic; *e.g.*, *Bitoma* **novella** (*B. maura*). If the preoccupation is the result of transferring a species from one genus to another, thus involving two generic names, the replaced binomial is also entered in first position, in italic, followed in parentheses by the new binomial (the new name appearing in lower-case bold face); *e.g.*, *Corixa dubia* (*Sigara* **paivai**).

In *new combinations* (*e.g.*, transfers of members from one genus to another), the specific name appears in lower-case bold-faced type, followed in parentheses and in italic by the genus from which the member is transferred; *e.g.*, *Anneslia* **anomala** (*Inga*). The old combination is also entered in first position, but wholly in italic, followed in parentheses and in italic by the genus to which the transfer is made: *Inga anomala* (*Anneslia*). If in making the transfer any change in specific, varietal, etc., names is made, the full combinations are given.

In the abstracts *new synonyms* are preceded by an equality sign and placed in parentheses; the name under which the synonym is sunk precedes, *e.g.*, *Sympronoe parva* (Claus) (=*S. anomala* Shoemaker).

A dagger (†) associated with a plant or animal name indicates that it is a *fossil*. The abbreviations in parentheses signify *geological periods*, as follows:

(Cb)	= Carboniferous	(N)	= Neogene
(Cm)	= Cambrian	(O)	= Ordovician
(D)	= Devonian	(Pl)	= Pleistocene
(E)	= Eogene	(Pr)	= Permian
(J)	= Jurassic	(S)	= Silurian
(K)	= Cretaceous	(Tr)	= Triassic

Some necessary variations from the above will be self-explanatory.

In the abstracts an asterisk (*) attached to a name indicates that the form is illustrated.

THE SYSTEMATIC INDEX

(pp. 1860-1883)

The indexing in the systematic index is limited to those disciplines in which the interest is more or less strongly by systematic groups, notably the taxonomic and morphological. The indexing is confined at present to the following subjects, the references being grouped correspondingly under the abbreviations given in parentheses:

Morphology, including anatomy (MORPH.)	Life History (L. H.)
Histology (HIST.)	Phylogeny (PHYL.)
Cytology (CYT.)	Geographical distribution (DIST.)
Embryology (EMB.)	Bibliography (BIBL.)
	Taxonomy (TAX.)

In departure from the policy of previous years, all taxonomic information, of whatever character—including the description of new species, subspecies, varieties, forms, aberrations, etc., and the publication of new names, new combinations, and new reductions to synonymy (but not including the erection of new genera or of supergeneric groups)—is assembled under the category **TAX.**

Superspecific entities (subgenera, genera, and higher groups) proposed as new to science are listed by name in bold-faced capitals, *e.g.*, **NOBOLIRA.** New genera appear in alphabetic order among the other genera of the particular group; new subgenera are indented under the corresponding genera; in new supergeneric groups the exact position of the names varies somewhat, depending upon the rank of the group and whether the name is merely indexed or whether utilized by the editor for arranging subordinate groups under it. All new superspecific group names, except genera, are accompanied by a statement of

the rank assigned to them by the authors, *e.g.*, n. subg., n. ord., etc.

Certain *fossil genera* of very doubtful position, or form genera of broad scope, are omitted from the systematic index; they are, however, included in the subject index.

Geographical distribution (**DIST.**) is in general entered in the systematic index only when treated more or less comprehensively or when data of apparently peculiar interest are presented. Some variation in this policy will be noted. Geographical distribution is, however, indexed fully by groups under geographical and political units in the Geographical Index (see below). This, it is believed, will be found useful because the interest in much recorded distributional information is local. However, by consulting the Geographical Index the student desiring more exhaustive information regarding distribution will be able to assemble easily the desired references.

Papers treating a group (family, order, etc.) more or less comprehensively from some point of view (morphology, taxonomy, cytology, etc.) are frequently indexed under the broader group, though they may also be entered under individual genera. However, new species, new varieties, new combinations, etc., are invariably referred to under the genera.

Genera are arranged alphabetically under groups, and are therefore easily located. If, on the other hand, the systematic index is consulted for subjects—cytology, embryology, life history, etc.,—the distinctive type used for the abbreviations renders the assembling of references from this point of view almost equally simple.

The *systems of classification* used in the various groups are determined by the editors in charge of the respective sections. In general the policy is to use conservative modern classifications; also, to omit intermediate groups, especially subfamilies (a few large families in Lepidoptera being the only exceptions). Since the purpose of the systems here used is chiefly to facilitate the location of desired information, it is believed that the omission of these taxonomic refinements will contribute to, rather than detract from, the utility of the index; furthermore, these refinements are more likely to be fluctuating and controversial, involving changes in successive volumes confusing to the user of the indexes.

GEOGRAPHICAL AND GEOLOGICAL INDEXES

THE GEOGRAPHICAL INDEX

(pp. 1884-1892)

This index is devoted to the indexing of geographical information, particularly the geographical distribution of organisms.

The various geographical areas adopted as units for indexing purposes are grouped under the following major headings: North America, South America, Europe, Africa, Asia, Malay Archipelago, Australasia, Antarctica, Oceanic Islands, and Oceans. The arrangement of the areas under each of these major headings is alphabetical except in the case of North America, where the countries are arranged in a general north-to-south sequence. The subdivisions of any country, such as the provinces of Canada or the separate states of the United States, are arranged alphabetically under that country.

Under each geographical area or unit, organisms are listed by group names arranged alphabetically and corresponding approximately to the systematic sections of current abstract issues; *e.g.*, "Coleoptera," "Fungi," "Mammalia," etc. Items of information pertaining to geographical distribution, but not readily classifiable by systematic groups, are entered in the index above the systematic group names.

A limited amount of indexing is done under the larger geographical units (*e.g.*, West Indies; Europe; Africa, northern), either because the papers in question treat the area more or less comprehensively or because the locality data are not sufficiently specific in the original to permit of more circumscribed allocation.

The names of all geographical areas or units adopted for indexing purposes are printed in their proper places in this index. A few, however, are followed by no abstract numbers; this indicates that the current volume contains no material for indexing under those names.

For indexing purposes, it is a general policy to include coastal islands with near-by mainland countries rather than with oceanic island groups. Likewise coastal waters, up to the 100-fathom line, are generally included with the adjoining mainland. Oceans include adjoining gulfs, bays, and smaller seas. For the most part, only aquatic organisms are indexed under oceans. For abstracts dealing with organisms of a certain kind of distribution, such as coastal fishes (Pisces) or pelagic birds (Aves), references may be given both under an ocean and under a land area.

A dagger (†) preceding an abstract number indicates that the abstract deals with a fossil organism or organisms.

Various letter symbols in parentheses signify *geological periods*, as follows:

(Cb)	= Carboniferous	(N)	= Neogene
(Cm)	= Cambrian	(O)	= Ordovician
(D)	= Devonian	(Pl)	= Pleistocene
(E)	= Eogene	(Pr)	= Permian
(J)	= Jurassic	(S)	= Silurian
(K)	= Cretaceous	(Tr)	= Triassic

Additional information on the distribution of organisms, as far as it pertains to the geological occurrence of fossil species, is indexed in the Geological Index under the names of the geological periods, on page 1893.

Abstract numbers in bold-faced type indicate that new taxonomic concepts (e.g., new species or subspecies) are proposed in the papers referred to.

THE GEOLOGICAL INDEX TO PALEONTOLOGICAL MATERIAL

(p. 1893)

This index is devoted to the indexing of paleontological information on the basis of the geological time scale. The sequence progresses from older to younger strata by eras and periods. Under each period organisms are listed by group names arranged alphabetically and corresponding approximately to the systematic sections of current abstract issues, *e.g.*, "Crustacea," "Gymnospermae," "Mammalia," etc.; the only important exception is represented by "Insecta," the orders of which are not separated. For a detailed systematic approach to paleontological material the Systematic Index (pp. 1860-1883) should be consulted.

A limited amount of indexing is done under the eras, either because the papers in question are more or less comprehensive or because the geological data are not sufficiently specific in the original to permit of allocation to periods.

In general, geographical locations are not included; for a geographical approach to paleontological material, the Geographical Index (pp. 1884-1892) should be consulted.

For an alphabetical approach to fossil forms, the Subject Index (p. 1894 to end) should be consulted.

Abstract numbers in bold-faced type indicate that new taxonomic concepts (e.g., new species or subspecies) are proposed in the papers referred to.

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Saccothecium, TAX., 15453
Sphaerella, TAX., 15453
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STEREOSPHAERIA, 15453
Teichospora, TAX., 15453
Trematosphaeria, TAX., 15453
Valsella, TAX., 15453
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HYPOCREACEAE
Balansia, TAX., 2800, 17500
Calonectria, TAX., 15453, 17500
Claviceps, L. H., 10345
Cordyceps, TAX., 15456
Dothichloe, L. H., TAX., 13782
Hypomyces, TAX., 8399
Melanospora, L. H., 4736
Nectria, TAX., 8407, 15453, 17500
Neurospora, CYT., 5289; L. H., 2809, 2810, 6336; MORPH., 6336
Phaeonectria, TAX., 15453
Podostroma, TAX., 8387
Thyronectria, TAX., 6846

VERRUCARIACEAE
Anthracothecium, TAX., 15474
Dermatocarpon, TAX., 17504
Thelidium, TAX., 6864
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NIESSLIACEAE
ACANTHOSPHAERIA, 15453
MELANOSTIGMA, 15453
OPHIOSPHAERIA, 15453
PLEOSTIGMA, 15453

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DOTHIDEACEAE
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Endodothella, TAX., 17498
Exarmidium, TAX., 15453
Homostegia, TAX., 15453
Phyllachora, TAX., 2800, 8407, 17498, 17500
Rhopographus, TAX., 15453
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MYRIANGIACEAE
Elsinoë, DIST., L. H., TAX., 2798
KERNIOMYCES, 13738
Myriangium, MORPH., 6950

INCERTAE SEDIS
(In Dothideales)
ANGIOTHECA, 17500

MICROTHYRIALES
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MICROTHYRIACEAE
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Clypeolella, TAX., 17498
Englerulaster, TAX., 17498
Lembosia, TAX., 17498, 17500
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Arthoniopsis, **TAX.**, 10117
Graphis, **TAX.**, 17503
Opegrapha, **TAX.**, 17508

PHACIDIACEAE
Bifusella, **TAX.**, 11812

STICTIDACEAE
Diplonaevia, **TAX.**, 6864

PEZIZALES
DERMATEACEAE
Podophacidium, **TAX.**, 15460

COLLEMACEAE
Lempholemma, **TAX.**, 15475

PELTIGERACEAE
Sporopodium, **TAX.**, 10117

LECIDEACEAE
Biatorella, **TAX.**, 6364, 17508
Catillaria, **TAX.**, 6364, 17503
Lecidea, **L. H.**, 1090; **TAX.**, 1089, 1090, 6364, 8412, 15475, 17503
Rhizocarpon, **TAX.**, 6364
Sarcogyne, **TAX.**, 6364, 8413
Umbilicaria, **TAX.**, 6364, 10116

CLADONIACEAE
Cladonia, **DIST.**, 4744, 4746, 4747, 6363, 6366; **MORPH.**, 4744; **TAX.**, 4746
Stereocaulon, **DIST.**, 6363; **TAX.**, 15475, 17504

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Alectoria, **TAX.**, 6364
Calenia, **TAX.**, 10117
Candelariella, **TAX.**, 6364
Hydrothyria, **DIST.**, 13739
Lecanora, **TAX.**, 6364, 8412, 15473, 15475, 17503
Pannoparmelia, **TAX.**, 6364
Parmelia, **TAX.**, 6364, 8410, 8415, 15473, 17503, 17504
Perforaria, **DIST.**, 6363
Pertusaria, **TAX.**, 8410, 15473
Phlyctis, **TAX.**, 15473
Polycauliona, **TAX.**, 8412
Ramalina, **TAX.**, 15473
Thelotrema, **TAX.**, 15473
Usnea, **TAX.**, 6364

PHYSCIACEAE
Anaptychia, **DIST.**, 1092, 13740; **L. H.**, 13740
Blastenia, **TAX.**, 6364
Buellia, **TAX.**, 6364, 17503
Caloplaca, **TAX.**, 17503
Gasparrinia, **TAX.**, 6364
HUEA, 6364
Kuttlingeria, **TAX.**, 6364
Physcia, **DIST.**, 6363
Polycauliona, **TAX.**, 6364
Protoblastenia, **TAX.**, 6364
Pyrenodesmia, **TAX.**, 6364
Rinodina, **TAX.**, 6364, 15475
Teloschistes, **DIST.**, 1092
Xanthoria, **TAX.**, 6364, 15473

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Phaeofabraea, **TAX.**, 17500
Pyrenopeziza, **TAX.**, 11818

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Discorehmia, **TAX.**, 15453
Helotium, **MORPH.**, **TAX.**, 4733
Lachnum, **TAX.**, 11813
Pezizella, **TAX.**, 15453
Sclerotinia, **DIST.**, 1482; **L. H.**, 10343, 15804, 15809; **TAX.**, 15447

PEZIZACEAE
Cookeina, **DIST.**, **TAX.**, 6349
Lamprospora, **TAX.**, 11815
Melastiza, **TAX.**, 11815

ASCOBOLACEAE
Ascobolus, **CYT.**, **L. H.**, 17485

INCERTAE SEDIS
(In Pezizales)
Ionomidotis, **TAX.**, 11813
Omphalodium, **TAX.**, 6364

AGYRIALES
Atichiaceae, **TAX.**, 13733

AGYRIACEAE
Endocolium, **TAX.**, 8407

EXOASCACEAE
Exoascus, **TAX.**, 6351
Taphrina, **DIST.**, **MORPH.**, 2804; **L. H.**, 2804, 2805; **TAX.**, 2805, 11821, 15451

TUBERALES
TAX., 8390

ELAPHOMYCETACEAE
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TUBERACEAE
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PETCHIOMYCES, 8390
Tuber, **MORPH.**, 4735

INCERTAE SEDIS
(In Ascomycetes)
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LUDWIGOMYCES, 15453
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PROMYCETES

PUCCINIALES
(UREDINALES)
CYT., 17494; **DIST.**, 6345, 8398; **L. H.**, 8396, 17494; **MORPH.**, **TAX.**, 6345; **PHYL.**, 8396; Uredineae, **DIST.**, 4738

PUCCINIACEAE
Aecidium, **DIST.**, 6345; **L. H.**, 15457; **TAX.**, 17498, 17500
Blastospora, **MORPH.**, 1076; **TAX.**, 1076, 6347
Cerotelium, **TAX.**, 17498
Chaconia, **TAX.**, 6347
Chrysocyclus, **DIST.**, 6345
Gymnosporangium, **MORPH.**, 17754
Hemileia, **TAX.**, 17500
Maravalia, **DIST.**, 6345; **TAX.**, 6347, 6348
Nyssopsora, **TAX.**, 8407
Phragmidium, **MORPH.**, 1453
Pileolaria, **TAX.**, 8409
Poliotelium, **TAX.**, 6348
Prospodium, **DIST.**, **TAX.**, 6345
Puccinia, **CYT.**, 17494; **DIST.**, 6345; **L. H.**, 8396, 17494; **TAX.**, 6345, 8409, 17948, 17500
Ravenelia, **TAX.**, 17498
SCOPELLA, 15455
Tranzschelia, **CYT.**, **L. H.**, 17494; **MORPH.**, 3107
Uredo, **DIST.**, 6345; **TAX.**, 6345, 15455
Uromyces, **CYT.**, 17494; **DIST.**, 6345; **L. H.**, 15457, 17494; **MORPH.**, 17760; **TAX.**, 6348, 15455

MELAMPSORACEAE
Calyptospora, **L. H.**, **TAX.**, 11816
Chrysomyxa, **L. H.**, 8396
Melampsora, **CYT.**, 17494; **L. H.**, 8396, 17494
Phakopsora, **DIST.**, 6345

USTILAGINALES
USTILAGINACEAE
Cintractia, **TAX.**, 2800
Sphacelotheca, **L. H.**, 2814, 15468; **TAX.**, 17500
Tolyposporium, **TAX.**, 17500
Ustilago, **L. H.**, 2814; **TAX.**, 2814, 8407, 8409, 11831, 17500

TILLETIACEAE
Neovossia, **TAX.**, 2811
Tilletia, **MORPH.**, **TAX.**, 4733

BASIDIOMYCETES

DIST., 1072, 2800, 4740; **MORPH.**, 4740; **PHYL.**, 8402; **TAX.**, 15462

TREMELLALES
AURICULARUACEAE
Helicobasidium, **DIST.**, **L. H.**, 13735
Jola, **TAX.**, 11820

TREMELLACEAE
Sebacina, **DIST.**, 2812; **MORPH.**, 2812, 4741
Tulasnella, **TAX.**, 11830

DACRYOMYCETACEAE
Arrhytidia, **DIST.**, **TAX.**, 4734
Calocera, **DIST.**, **TAX.**, 4734
Dacrymyces, **DIST.**, **TAX.**, 4734
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HYPOCHNACEAE
Hypochnus, **TAX.**, 15459

THELEPHORACEAE
Corticium, **DIST.**, 2812; **MORPH.**, 2812, 4964; **TAX.**, 15812, 17492
Gyrophana, **MORPH.**, 8400
Mycobonia, **TAX.**, 11820
Peniophora, **DIST.**, **MORPH.**, 2812; **TAX.**, 17492
Stereum, **L. H.**, 6337; **TAX.**, 11820, 15449

CLAVARIACEAE
PHYL., **TAX.**, 15462
Clavaria, **TAX.**, 10112

HYDNACEAE
PHYL., **TAX.**, 15462
Dryodon, **MORPH.**, **TAX.**, 15462
Hydnum, **DIST.**, 8395

POLYPORACEAE
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Abortiporus, **TAX.**, 6353
Aurantiporus, **TAX.**, 6353
Boletus, **DIST.**, **MORPH.**, 2801
Coriolopsis, **TAX.**, 6353
Coriolus, **TAX.**, 6353
Daedalea, **L. H.**, 13728; **MORPH.**, 1073, 13728; **TAX.**, 6353, 17486
Fomes, **L. H.**, 1079, 2799; **MORPH.**, 2799, 17493; **TAX.**, 6353
Fomitiporia, **TAX.**, 6353
Ganoderma, **L. H.**, 4737; **MORPH.**, 4737, 17493
Gyroporus, **DIST.**, **TAX.**, 4737
Hapalopilus, **TAX.**, 6353
Lenzites, **TAX.**, 14042
Microporellus, **TAX.**, 6353
Polyporus, **L. H.**, 13728, 13734; **MORPH.**, 13728; **TAX.**, 6353, 10108
Polystictus, **TAX.**, 6353
Poria, **DIST.**, 4737; **TAX.**, 4737, 6353, 15439, 17492
Pyropolyporus, **TAX.**, 6353
Trametes, **TAX.**, 6353
Tyromyces, **TAX.**, 6353

AGARICACEAE
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Agaricus, **DIST.**, **TAX.**, 4737
Agrocybe, **TAX.**, 11825
Clitocybe, **TAX.**, 6339, 8403
Collybia, **TAX.**, 10110, 11825
Coprinus, **DIST.**, 2801; **L. H.**, 6343; **MORPH.**, 2801, 6343; **TAX.**, 2801, 2808, 6342, 6343, 6344, 10109, 15448
Cortinarius, **MORPH.**, 2803; **TAX.**, 2803, 8393, 8394
Entoloma, **DIST.**, **MORPH.**, 2801
Flammula, **DIST.**, **MORPH.**, 2801; **TAX.**, 8404
Galactopus, **DIST.**, **TAX.**, 4737
Galeropsis, **TAX.**, 15462
Gymnopus, **DIST.**, 4737; **TAX.**, 4737, 8403
Hiatula, **TAX.**, 11825
Hydrocybe, **TAX.**, 8403
Hygrophorus, **TAX.**, 8403
Lactaria, **DIST.**, **TAX.**, 4737
Lactarius, **CYT.**, 44; **MORPH.**, 6359; **TAX.**, 8386, 8397, 11824, 17497
Lepiota, **TAX.**, 8403
Marasmiellus, **TAX.**, 8403
Marasmius, **DIST.**, **MORPH.**, 2801; **TAX.**, 8403, 11825, 15462
Mycena, **CYT.**, 8398; **TAX.**, 8398, 11825, 11827
EU-MYCENA, **N. SUBGEN.**, 8398
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MYXOCOLLYBIA, 11825
Naucoria, **DIST.**, **MORPH.**, 1075; **TAX.**, 11825
Nolanea, **DIST.**, **MORPH.**, 2801
Panellus, **TAX.**, 15462
Panus, **TAX.**, 15462
Pholiota, **L. H.**, 8405; **TAX.**, 11825
Phyllotopsis, **TAX.**, 15462
Pluteus, **DIST.**, **TAX.**, 4737
Psathyrella, **DIST.**, **MORPH.**, 2801
PSEUDOHIATULA, 11825
Rhodopaxillus, **TAX.**, 6339
Rhodophyllus, **TAX.**, 2818
Russula, **CYT.**, 44; **TAX.**, 6356, 8386, 8403, 11825, 13736, 15462
Tectella, **TAX.**, 15462
Velanopus, **TAX.**, 15462
Venenarius, **DIST.**, **TAX.**, 4737
Volvaria, **TAX.**, 11828
Xerula, **TAX.**, 1077

LYCOPERDALES
BATTARRAEACEAE, **N. FAM.**, 11830

LYCOPERDACEAE
Battarrea, **DIST.**, 2802; **TAX.**, 11830
Bovista, **DIST.**, **MORPH.**, 2812
Bovistella, **DIST.**, **MORPH.**, **TAX.**, 2801
Calvatia, **DIST.**, **MORPH.**, 2812
Geaster, **DIST.**, 2812; **MORPH.**, 2812, 8401
Lycoperdon, **DIST.**, **TAX.**, 2812; **HIST.**, **L. H.**, 17496; **MORPH.**, 2812, 6358
Scleroderma, **MORPH.**, 15466

HYMENOGASTRACEAE
PHYL., 8402
DODGEA, 8402
Gautieria, **DIST.**, **MORPH.**, 2812
Leucogaster, **DIST.**, **MORPH.**, 2812
Rhizopogon, **DIST.**, **MORPH.**, 2812

DEUTEROMYCETES

MORPH., **TAX.**, 13729

PHOMALES
PHOMACEAE
Chaetopyrena, **TAX.**, 15453
Coniothyrium, **TAX.**, 15453, 17500
Diachorella, **TAX.**, 17498
Diplodia, **MORPH.**, 2806
Haplosporella, **TAX.**, 15453
Hendersonia, **TAX.**, 15453
Leptodothiorella, **TAX.**, 17500
Naemosphaeria, **TAX.**, 15464
Phoma, **TAX.**, 10351, 11817, 15453
Phyllostictina, **TAX.**, 17500
Placosphaeria, **TAX.**, 15464
Pyrenochaeta, **TAX.**, 15453
Rhabdospora, **TAX.**, 15453, 15473
Robillarda, **TAX.**, 15464
Septoria, **TAX.**, 8407, 15453, 15464, 17487
Sphaeropsis, **TAX.**, 13736
Stagonospora, **TAX.**, 3109, 17499

LEPTOSTROMACEAE
Sacidium, **TAX.**, 15453

DISCELLACEAE
Heteropatella, **TAX.**, 15464

INCERTAE SEDIS
(In Phomales)
CRYPTOGENE, 17500
CRYPTOGENELLA, 17500
ENERTHIDIUM, 17500
HYPOCLINE, 17500
MASSARIOTHEA, 17500
OOTHYRIUM, 17500

MELANCONIALES
MELANCONIACEAE
Colletotrichum, **TAX.**, 2811
Coryneum, **TAX.**, 4967
Sphaceloma, **DIST.**, **L. H.**, 2798; **TAX.**, 2798, 14036, 17487
Vermicularia, **TAX.**, 15453

MONILIALES
MONILIACEAE
Aspergillus, **DIST.**, **MORPH.**, **TAX.**, 13731
Beauveria, **L. H.**, 8665, 12229, 15450
Berkhoutia, **TAX.**, 4638
Botrytis, **DIST.**, 12174; **L. H.**, 12174, 14045, 15447; **MORPH.**, 6686
Cephalosporium, **MORPH.**, 1437
Didymopsis, **TAX.**, 17500
Eugeotrichum, **TAX.**, 4638
Fusoma, **TAX.**, 17487

Geotrichum, TAX., 4638, 15469
Gliocladium, TAX., 11822
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Malbranchea, TAX., 2796
Monacrosporium, TAX., 17487
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Oidium, TAX., 17487
Oospora, TAX., 15458
Penicillium, L. H., 6338; TAX., 6338, 11828, 17407
Phymatotrichum, DIST., 10371
Scopulariopsis, L. H., TAX., 6398
Spicaria, DIST., 12174; L. H., 3205, 12174

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Cercoseptoria, TAX., 17487
Cercospora, TAX., 3169, 10109, 17487
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CHRYSACHNE, 1074, 17487
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Dendrodochium, TAX., 15453
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DERMATOPHYTA
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Favotrichophyton, TAX., 4633
Piedraia, TAX., 4633
Proteomyces, TAX., 4645
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Trichosporon, TAX., 4645

STERILE MYCELIA
Rhizoctonia, DIST., L. H., 13735; MORPH., 17752; TAX., 17487
Sclerotium, MORPH., 4963

PSEUDOSACCHAROMYCETES
Candida, MORPH., TAX., 4641
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INCERTAE SEDIS
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KLEBAHNOPYCNIS, 15453
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(In Fungi)
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JUNGERMANNIACEAE
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LESKEACEAE
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BRACHYTHECIACEAE
Brachythecium, DIST., 1094
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PLAGIOTHECIACEAE
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HYPNACEAE
Ctenidium, TAX., 2828A
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Photinia, **TAX.**, 15486
Potentilla, **TAX.**, 2865, 4784, 8444, 15486
Prunus, **CYT.**, 16153; **DIST.**, (†) 7048; **L.H.**, 10890; **MORPH.**, 15525; **TAX.**, 15486, (N) 17475, (N) 17478, (N) 17479
Pyrus, **CYT.**, 2997, 8910, 10230; **MORPH.**, 2997, 10230, 11928; **TAX.**, 15486
Rosa, **MORPH.**, 2908; **TAX.**, 1158, 8442, 15486
Rubus, **TAX.**, 1158, 8444
Sorbaronia, **TAX.**, 8434, 8435, 15486
Sorbus, **TAX.**, 8435, 8442, 15486
Spiraea, **TAX.**, 15486

CONNARACEAE
Rourea, **TAX.**, 2865

MIMOSACEAE
(LEGUMINOSAE, pars)
CYT., **PHYL.**, 3450; **TAX.**, 3450, 17534
Albizzia, **TAX.**, 1123
Calliandra, **TAX.**, 2828A
Inga, **TAX.**, 6437
Prosopis, **TAX.**, (M) 17475

CAESALPINIACEAE
(LEGUMINOSAE, pars)
CYT.; **PHYL.**, 3450; **TAX.**, 3450, 17534
Bauhinia, **HIST.**, 8449
Brownea, **TAX.**, 2827A
Caesalpinia, **TAX.**, 6398
Cassia, **DIST.**, (†) 7048
LEMUROPISUM, 11877

FABACEAE
(LEGUMINOSAE, pars)
CYT., **PHYL.**, 3450; **TAX.**, 3450, 10131, 11857, 17534
Astragalus, **TAX.**, 8442, 11894
Baptisia, **TAX.**, 17531
Cicer, **CYT.**, 12505
Coumarouna, **TAX.**, 2856
Crotalaria, **MORPH.**, 4804
Derris, **DIST.**, 10466; **L. H.**, 12285
Desmodium, **TAX.**, 2828A
Dorycnium, **TAX.**, 8444
Erythrina, **TAX.**, 1123, 11890
Glycyrrhizopsis, **TAX.**, 10115

Laburnum, **DIST.**, **TAX.**, 10157
Lathyrus, **TAX.**, 1158
Lupinus, **TAX.**, 1158, 4763, 4781, 6400, 6402, 10130, 11854
Phaseolus, **CYT.**, 8909; **MORPH.**, 6451; **TAX.**, 13751
Pisum, **CYT.**, 49, 1704, 8909
Pterocarpus, **TAX.**, 11873A
Rhynchosia, **TAX.**, 2828A, 2870, 15505
Robinia, **DIST.**, 6533
Sarothamnus, **TAX.**, 1143
Taralea, **TAX.**, 2856
Tephrosia, **L. H.**, 12223
Trifolium, **CYT.**, 49; **TAX.**, 1158
Vicia, **CYT.**, 49, 1702, 10720, 10721
Vigna, **TAX.**, 2870

GERANIALES

GERANIACEAE
Geranium, **TAX.**, 1158

TROPAEOLACEAE
Tropaeolum, **MORPH.**, 6451, 15522

LINACEAE
Linum, **TAX.**, 1158

ZYGOPHYLLACEAE
Larrea, **DIST.**, 7048
Tribulus, **MORPH.**, 6549

RUTACEAE
TAX., 4783
Aurantioideae, **MORPH.**, **PHYL.**, **TAX.**, 4814
BURKILLANTHUS, 13761
Citrus, **TAX.**, 4783
CLYMENIA, 13761
Dutaillyea, **TAX.**, 4783
Evodia, **TAX.**, 6431, 15505
Melicope, **TAX.**, 4783
Pelea, **TAX.**, 4783
Pleiospermium, **TAX.**, 13761
Vepris, **TAX.**, 2828
Zanthoxylon, **L. H.**, 12223; **TAX.**, 2828A, 8426
Zieridium, **TAX.**, 4783

SIMARUBACEAE
TAX., 8434
Ailanthus, **MORPH.**, 6444
Picramnia, **TAX.**, 2828A

BURSERACEAE
TAX., 8434
Bursera, **TAX.**, 11879

MELIACEAE
Azadirachta, **DIST.**, 10282
Dysoxylum, **TAX.**, 13768
Vavaea, **TAX.**, 13768

EUPHORBIACEAE
MORPH., 8433; **TAX.**, 1132, 8433
Bernardia, **TAX.**, 17535
Claoxylon, **TAX.**, 13768
Cleistanthus, **TAX.**, 15505
Conceveiba, **TAX.**, 2885
Drypetes, **TAX.**, 2885
Elaeophorbia, **TAX.**, 1127
Euphorbia, **EMB.**, 2913, 10128, 13756; **TAX.**, 1127
Mabea, **TAX.**, 2885
Omphalea, **TAX.**, 15483
Phyllanthus, **TAX.**, 1132
Richeria, **TAX.**, 2885
Ricinus, **HIST.**, 10172
Sphaerostylis, **TAX.**, 15505

SAPINDALES
Ilicaceae, **TAX.**, 1128

BUXACEAE
Sarcococca, **TAX.**, 11886

ANACARDIACEAE
Actinocheita, **TAX.**, 15497
Rhus, **TAX.**, 11880, 15497, (N) 17475

AQUIFOLIACEAE
Ilex, **TAX.**, 2828A, 11893, (N) 17479

CELASTRACEAE
Celastrus, **TAX.**, 15504
Glossopetalon, **TAX.**, 1158
Gymnosporia, **TAX.**, 15504
Lophopetalum, **TAX.**, 15504
Maytenus, **TAX.**, 4785, 15504
Myginda, **TAX.**, 15504
Solenospermum, **TAX.**, 15504

HIPPOCRATEACEAE
Hippocratea, **EMB.**, **TAX.**, 4806
Salacia, **EMB.**, 4806; **TAX.**, 4806, 8439

ACERACEAE
Acer, **DIST.**, 6418A; **L. H.**, 2804, 2805; **MORPH.**, **PHYL.**, 4776

SAPINDACEAE
Cardiospermum, **EMB.**, **TAX.**, 4806
Cupaniopsis, **TAX.**, 6431
Gelonium, **TAX.**, 2848
Lychnodiscus, **TAX.**, 2843
Melanodiscus, **TAX.**, 2843
Paullinia, **TAX.**, 6437
Phialodiscus, **TAX.**, 2843
Placodiscus, **TAX.**, 2843
Sapindus, **EMB.**, **TAX.**, 4806; **TAX.**, (N) 17475

SABIACEAE
Meliosma, **TAX.**, 15505, (E) 17477

BALSAMINACEAE
Impatiens, **CYT.**, 45; **MORPH.**, 6451

RHAMNALES

RHAMNACEAE
Ceanothus, **TAX.**, 6412, (N) 17475, 17532
Colletia, **TAX.**, 10152
Condalia, **TAX.**, 11886
Gouania, **TAX.**, 2858
Rhamnus, **TAX.**, 6419

VITACEAE
MORPH., **PHYL.**, (†) 2783
Ampelocissus, **MORPH.**, 2783; **TAX.**, 15483
Cissus, **TAX.**, 2828A, 15483
Tetrastigma, **MORPH.**, 2783; **TAX.**, (E) 4724
Vitis, **MORPH.**, (†) 2783

MALVALES
MORPH., **TAX.**, 8433

ELAEOCARPACEAE
Sloanea, **TAX.**, 6437

TILIACEAE
Brownlowia, **TAX.**, 15498
Grewia, **TAX.**, 15498
Microcos, **TAX.**, 15505
MORTONIODENDRON, 2885
Tilia, **MORPH.**, 11853
Trichospermum, **TAX.**, 15498

MALVACEAE
CYT., 1700; **TAX.**, 6423
Althaea, **HIST.**, 4807
Gossypium, **CYT.**, 11765, 17551; **TAX.**, 6492
Malvastrum, **TAX.**, 11854
Periptera, **TAX.**, 10126
Prestonia, **TAX.**, 2867
Sphaeralcea, **DIST.**, (†) 7048; **TAX.**, 1158

BOMBACACEAE
Ceiba, **MORPH.**, 4811

VIOLALES (PARIETALES)

DILLENIACEAE
Clethra, **TAX.**, 2882
Saurauja, **TAX.**, 2861

EUCRYPHIACEAE
DIST., **MORPH.**, **TAX.**, 10125

OCHNACEAE
Sauvagesia, **MORPH.**, 1139

THEACEAE
Adinandra, **TAX.**, 8426
Eurya, **TAX.**, 6429

HYPERICACEAE (GUTTIFERAE, pars)
Hypericum, **TAX.**, 8436, 8444

CLUSIACEAE (GUTTIFERAE, pars)
Tovomita, **TAX.**, 2827A

ELATINACEAE
Elatine, **TAX.**, 2886

FRANKENIACEAE
Frankenia, **TAX.**, 11886

CISTACEAE
Helianthemum, **TAX.**, 17538

VIOLACEAE
Viola, **TAX.**, 1158, 2844, 4800, 13754, 17540

FLACOURTIACEAE
TAX., 2881
Banara, **TAX.**, 2881
Hasseltia, **TAX.**, 2881
HASSELTIOPSIS, 2881
Neosprucea, 2881
Prockia, **TAX.**, 2881

LOASACEAE
Mentzelia, **TAX.**, 1158

DATISCACEAE
Octomeles, **DIST.**, 3023
Tetrameles, **DIST.**, 3023

BEGONIACEAE
CYT., 41
Begonia, **TAX.**, 2828A, 6429

OPUNTIALES
Rebutieae, **TAX.**, 6396

CACTACEAE
TAX., 8440
Echinocereus, **TAX.**, 1137
Hylocerus, **MORPH.**, 13787
Mammillaria, **TAX.**, 2862
Opuntia, **DIST.**, (†) 7048
Rebutia, **TAX.**, 6397
Rhipsalis, **TAX.**, 6437

MYRTALES (MYRTIFLORAE)

LYTHRACEAE
Cuphea, **MORPH.**, 1139
Parsonia, **TAX.**, 13768
Rhynchocalyx, **TAX.**, 10155

COMBRETACEAE
Combretum, **TAX.**, 2828

MYRTACEAE
Eucalyptus, **TAX.**, 17518
Eugenia, **TAX.**, 2828A, 4785, 6437
KJELLBERGIODENDRON, 10127
Metrosideros, **TAX.**, 6431
Pareugenia, **TAX.**, 6431
Syzygium, **TAX.**, 2828, 6431, 11892

MELASTOMATACEAE
Anplectrum, **TAX.**, 15505
Astronidium, **TAX.**, 6431
Blakea, **TAX.**, 2827A, 2828A, 6437, 17526
Blastus, **TAX.**, 15505
Chaetolepis, **TAX.**, 2882
Clidemia, **TAX.**, 2882, 17526
Conostegia, **TAX.**, 2827A, 2882, 17526
Medinilla, **TAX.**, 6431, 15505
Melastoma, **TAX.**, 15505
Miconia, **TAX.**, 2827A, 2882, 17526
Ossaea, **TAX.**, 2882
Tibouchina, **TAX.**, 17525, 17526
Topobea, **TAX.**, 2882
Tristemma, **TAX.**, 2828

ONAGRACEAE (OENOTHERACEAE)
Epilobium, **TAX.**, 1158, 8442
Fuchsia, **TAX.**, 2827A, 11887
Ludvigia, **TAX.**, 6381
Oenothera, **CYT.**, 40, 7103, 10719; **TAX.**, 6421, 6422
Onagra, **CYT.**, 7103

HYDROCARYACEAE
Trapa, **TAX.**, (E) 10096

HALORRHAGIDACEAE
Linociera, **TAX.**, 15508

UMBELLALES (UMBELLIFLORAE)

ARALIACEAE
Boerlagiodendron, **TAX.**, 13768
Horsfieldia, **TAX.**, 4780, 15505
Oreopanax, **TAX.**, (N) 10099
Sciadophyllum, **TAX.**, 6437
Tieghemopanax, **TAX.**, 13768

APIACEAE (UMBELLIFERAE)
CHLAENOSCIADIUM, 1135
Cogswellia, **TAX.**, 1158
Daucus, **MORPH.**, 10167
Eremocarpus, **TAX.**, 2888
Ligusticum, **TAX.**, 1158
Lindera, **TAX.**, 15486
Lomatium, **TAX.**, 1158
Marathrum, **TAX.**, 6429
PLEUROSPERMOPSIS, 1185
Trachydium, **TAX.**, 1186
Velaea, **TAX.**, 10186

CORNACEAE
PHYL., 4724
Cornus, **TAX.**, 1158
Mastixia, **TAX.**, (E) 4724
Nyssa, **TAX.**, (E) 4724
RETINOMASTIXIA, (E) 4724
XYLOMASTIXIA, (E) 4724

ERICALES

PYROLACEAE
Allotropa, **MORPH.**, 2853

ERICACEAE
TAX., 8438, 11882
Agapetes, **TAX.** 11882
Agauria, **TAX.**, 4790
Anthopterus, **TAX.**, 10153
Arctostaphylos, **TAX.**, (N) 17475
Calluna, **DIST.**, **MORPH.**, 2909
Dimorphanthera, **TAX.**, 11882
Eubotrys, **TAX.**, 15507
Gaultheria, **TAX.**, 4778, 15507
Leucothoe, **TAX.**, 15507
Pelleginia, **TAX.**, 15507
Pernettya, **TAX.**, 4778, 15507
Themistoclesia, **TAX.**, 10153
Vaccinium, **TAX.**, 2882, 6426, 10153, 10154

DIAPENSIACEAE
Diapensia, **CYT.**, **PHYL.**, 8905
Galax, **CYT.**, **PHYL.**, 8905

PRIMULALES

MYRSINACEAE
Ardisia, **TAX.**, 2882, 6429, 15510

PRIMULACEAE
Anagallis, **TAX.**, 13759
Dodecatheon, **TAX.**, 1158

PLUMBAGENACEAE
TAX., 2875
Goniolimon, **TAX.**, 8444
Plumbagella, **MORPH.**, **PHYL.**, 17553

EBENALES

SAPOTACEAE
Bumelia, **TAX.**, 2882
Burckella, **TAX.** 6431
Dipholis, **TAX.**, 2882
Mimusops, **TAX.**, 2828
Nesoluma, **TAX.**, 1131
Tridesmostemon, **DIST.**, **TAX.**, 1138
Vitellaria, **TAX.**, 2827A

EBENACEAE
Diospyros, **TAX.**, 2858, 8431, 17524
Maba, **TAX.**, 17524

STYRACACEAE
Styrax, **EMB.**, **MORPH.**, **PHYL.**, 4805

SYMPLOCACEAE
Symplocos, **TAX.**, 2882, (E) 4724

GENTIANALES (CONTORTAE)

OLEACEAE
Fraxinus, **DIST.** (†) 7048; **MORPH.**, 10145; **TAX.**, 2828A, 10145, 17475
Heisteria, **TAX.**, 2865
Jasminum, **MORPH.**, 15522; **TAX.**, 11889, 15483, 15503
Olea, **MORPH.**, 1172
Osmanthus, **MORPH.**, 10144; **TAX.**, 4785

SALVADORACEAE
Azima, **EMB.**, **TAX.**, 4806

LOGANIACEAE
Strychnos, **DIST.**, **TAX.**, 13752

GENTIANACEAE
Bartonia, **TAX.**, 1158
Centaurium, **TAX.**, 1158, 10138
Curtia, **TAX.**, 2863
Gentiana, **MORPH.**, 2912; **TAX.**, 11891
Halenia, **TAX.**, 2882
Leiphaimos, **MORPH.**, 13788
Macrocarpaea, **TAX.**, 2882
Sweertia, **TAX.**, 2870

APOCYNACEAE
Allamanda, **MORPH.**, 15522
Alyxia, **TAX.**, 15505
Aspidosperma, **TAX.**, 2867
Fernaldia, **TAX.**, 11900
Galactophora, **TAX.**, 2867

Macrosiphonia, TAX., 11900
Mandevilla, TAX., 11900
Odontadenia, TAX., 2867
Rauwolfia, TAX., 2882
Tabernaemontana, TAX., 2882, 15505
Vinca, HIST., 10172

ASCLEPIADACEAE
Caralluma, TAX., 6418
Ceropegia, TAX., 17541
Gonolobus, TAX., 2867
Marsdenia, TAX., 2882
Metastelma, TAX., 2882
Schizoglossum, TAX., 2870
Solenostemma, MORPH., 11899
Stapelia, TAX., 6418
Stultitia, TAX., 1145
Tylophora, TAX., 13768, 15483
Vincetoxicum, TAX., 2828A, 2882, 6429
Xysmalobium, TAX., 2870

POLEMONIALES (TUBIFLORAE)
Labiatae, DIST., 17522

CONVOLVULACEA
ACMOSTERMON, 10148
ASTROMERREMIA, 10148
Cuscuta, MORPH., 15817
Ipomoea, HIST., 10172; TAX., 2828, 6437

POLEMONIACEAE
Collomia, TAX., 1158
Gilia, TAX., 1158
Linanthus, TAX., *2868*, *4797B*
Navarretia, TAX., 4797
Phlox, TAX., 1158, 6403

FOUQUIERIACEAE
Fouquiera, TAX., 11886

HYDROPHYLLACEAE
TAX., 17520
Capnorea, TAX., 1158
Ellisia, TAX., *17520*
Eucrypta, TAX., 4779, 17520
Nemophila, TAX., 17520
Hesperochiron, TAX., 1158
Hydrophyllum, TAX., 8442
Nama, TAX., 13758
Phacelia, TAX., 4779, 8442
Pholistoma, TAX., 17519, 17520

BORAGINACEAE
Ehretia, TAX., 2882
Heliotropium, MORPH., 2910
Lycopsis, EMB., 2915
Tournefortia, TAX., 2882

VERBENACEAE
Callicarpa, TAX., 13753
Clerodendron, TAX., 2882
Duranta, L. H., 12223; TAX., 2882
Lippia, TAX., 2882

MENTHACEAE (LABIATAE)
Alopecurus, CYT., TAX., 4774
Galeopsis, CYT., 12507
Hyptis, TAX., 5268, 17521
Lepechinia, TAX., 2882
Mentha, CYT., 1701
Petunia, CYT., 14347
Salvia, CYT., 1697; DIST., 17522; TAX., 2882, 5268, 8444, 10119
Scutellaria, TAX., 6404, 17523
Sideritis, TAX., 8444
Thymus, TAX., 6425, 8444

SOLANACEAE
Athenaea, TAX., 2882
Capsicum, TAX., 2882, 6437
Hyoscyamus, TAX., 15511
Lycianthes, TAX., 2882, 6437
Markea, TAX., 2882
Nicotiana, CYT., 1168; EMB., MORPH., 1167
Physalis, DIST., (†) 7048; TAX., 2828A
Salpichroa, TAX., 2846, 6432
Solanum, CYT., 7097; HIST., 10172; TAX., 2882, 6437
VALERIOA, 2882

SCROPHULARIACEAE
Antirrhinum, CYT., 10713, 12501
Artanema, TAX., 11895
Buchnera, TAX., 11895
Calceolaria, TAX., 2882
Castilleja, TAX., 2882, 6399
Celsia, MORPH., 13786
Isoplexis, MORPH., 13786
Limnophila, TAX., 11895
Lindernia, TAX., 11895
Mimulus, TAX., 4786
Orthocarpus, TAX., 6399
Penstemon, TAX., 6410
Striga, TAX., 11895
Synthyris, TAX., 1158
Torenia, TAX., 11895
Verbascum, TAX., 8444

BIGNONIACEAE
Amphilophium, TAX., 2828A
Enallagma, TAX., 2882
Schlegelia, TAX., 2827A, 2882

OROBANCHACEAE
Conopholis, TAX., 6429
Orobanche, MORPH., 15817

GESNERIACEAE
Alloplectuus, TAX., 2827A, 6437
Besleria, TAX., 6437, 10146
Campanea, TAX., 6437
Centrosolenia, TAX., 6437
Codonanthe, TAX., 6437
Columnea, TAX., 2827A, 2828A, 6437
Cremosperma, TAX., 2872
Cyrtandra, TAX., 6431
Drymonia, TAX., 6437
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LENTIBULARIACEAE
Utricularia, *CYT.*, *EMB.*, *2907*; MORPH., 2907, 15522

GLOBULARIACEAE
Globularia, TAX., 4788

ACANTHACEAE
Adenosma, TAX., 11895
Aphelandra, TAX., 2827A, 6437
Beloperone, TAX., 6437
Blepharis, TAX., 15483
Buceragenia, TAX., 6437
Carlowrightia, TAX., 6437
Chamaeranthemum, TAX., 6437
Dicliptera, TAX., 6437
Dyschoriste, TAX., 6437
Elytraria, TAX., 2864
Glockeria, TAX., 6437
Jacobinia, TAX., 6437
Justicia, TAX., 6437
Lepidagathis, TAX., 15483
Mendoncia, TAX., 2885, 6437
Pseuderanthemum, TAX., 6437
Ruellia, TAX., 6437

MYOPORACEAE
Myoporum, EMB., TAX., 4806
Oftia, EMB., TAX., 4806

PLANTAGINALES
PLANTAGINACEAE
Plantago, DIST., 17544; TAX., 15482

RUBIALES
RUBIACEAE
Anisomeris, TAX., 2828A
Asperula, TAX., 8444
Cephaelis, TAX., 6437
Coffea, CYT., 12502
Coussarea, TAX., 6437
Didymaea, TAX., 6437
Enterospermum, TAX., 11885
Galium, TAX., 8444
Gardenia, L. H., 12223; TAX., 6437
Gonzalagunia, TAX., 6429, 6437
Guettarda, TAX., 6429, 6437
Hoffmannia, TAX., 2828A, 6437
Ixora, TAX., 2859, 6405, 6437, 11878
Ladenbergia, TAX., 6437
Machaonia, TAX., 6437
Morinda, TAX., 6431
Mussaenda, TAX., 1129, 15509
Myrmecodia, MORPH., 2916
Ophiorrhiza, TAX., 2874
Palicourea, TAX., 6429, 6437
Psychotria, TAX., 2828A, 6431, 6437
Randia, TAX., 2858, 6437
Rondeletia, TAX., 6437
Rudgea, TAX., 6437
Santalina, TAX., 11885
Sarcopygme, TAX., 6431
Tarenna, TAX., 11885
Tricalysia, TAX., 6437

OAPRIFOLIACEAE
Lonicera, TAX., 1158
Sambucus, TAX., 6381
Viburnum, TAX., (E) 17477

VALERIANACEAE
Belonanthus, TAX., 10150
Valeriana, TAX., 1158, 6437, 8443, 10150

DIPSACACEAE
Knautia, TAX., 8444

CAMPANULALES
(CAMPANULATAE)
CUCURBITACEAE
Bryonia, EMB., 11930
Cayaponia, TAX., 6437
Citrullus, MORPH., 10171
Cucumis, MORPH., 10171
Cucurbita, MORPH., 10171
Gurania, TAX., 6437
Lagenaria, MORPH., 10171
Trichosanthes, *MORPH.*, *15522*
Xerosicyos, TAX., 10137

CAMPANULACEAE
Burmeistera, TAX., 6437
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Centropogon, TAX., 6437
Clermontia, TAX., 11896, 11897
Cyananthus, TAX., 6397
Cyanea, TAX., 11897
Githopsis, TAX., 1158
Haynaldia, CYT., 7098
Lobelia, EMB., 11914; MORPH., 15520; TAX., 11897

GOODENIACEAE
EMB., 4812

ASTERACEAE
(COMPOSITAE)
Achillea, TAX., 17529
Achyrocline, TAX., 2828A
Ainsliaea, TAX., 15505
Antennaria, CYT., 3445; TAX., 1158
Aplopappus, TAX., 13751
Arnica, TAX., 1158
Artemisia, CYT., MORPH., 4808; TAX., 1158, 11888
Aster, CYT., TAX., 6428
Athroisma, TAX., 15483
Baccharis, TAX., 6437
Balsamorhiza, TAX., 1158
Blepharispermum, TAX., 15483
Cacalia, TAX., 6415, 13751
Calea, TAX., 6437
Chaptalia, TAX., 15500
Chrysanthemum, CYT., MORPH., 1134
Cirsium, TAX., 17528, 17539
Clibadium, *TAX.*, *13751*
Cosmos, HIST., 10172
Crepis, CYT., 4777, 7099, 16159; PHYL., 4777; TAX., 1122, 4777
Crupina, TAX., 8444
Dahlia, HIST., 2908
Desmanthodium, TAX., 13751
Dysodia, TAX., 15500
Erigeron, CYT., 3445; TAX., 13751, 15500
Erlangea, TAX., 15483
Eupatoriastrum, TAX., 13751
Eupatorium, MORPH., HIST., 17558
Gnaphalium, TAX., 8448
Haplopappus, TAX., 1158
Helianthus, MORPH., 2908
Hidalgoa, HIST., 10172
Hieracium, CYT., 3445; TAX., 1158, 8444
Hypochoeris, TAX., 15500
HYSTRICHOPHORA, 15483
Lactuca, CYT., 5294; TAX., 8444
Lapsana, TAX., 2883
Liabum, TAX., 6437
Mikania, TAX., 13751
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Perezia, TAX., 15500
Picris, TAX., 17530
Psacalium, TAX., 13751
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(System of classification in general according to G. N. Calkins, "Biology of the Protozoa" (1926); Foraminifera, according to J. A. Cushman, "Foraminifera, their Classification and Economic Use" (1928).)

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BRACHIOPODA · BRYOZOA · PHORONIDEA

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(Classification according to R. S. Bassler, "Classification of Bryozoa, Fossil and Recent" (1932).)

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LINGUATULIDA

(Vacant)

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LEPTOCARDII · MARSIPOBRANCHII · OSTRACOPHORI · ARTHRODIRA ELASMOBRANCHII · PISCES

(System of classification, in the main, according to Jordan, "A Classification of Fishes" (1923), with modifications from his later works. For Conodonts see under *Conodonts* in the subject index.)

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AMPHIBIA · REPTILIA

AMPHIBIA

(System of classification according to Noble, "The Biology of the Amphibia" (1931).)
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CYT., 7113; DIST., 5180, 5189, 5206, 7025, 10639, 10645, 14293, 16082, 16086, 16087; L. H., 1643, 7025, 10639, 10642, *10645*; MORPH., *1648, 7028, 7029, 9876, 11381, 14288, 15004, 15011, 16080*; TAX., *5200, 10639, 10646, 12469, 16069, 16080*

(Arrangement of orders and families according to Wetmore, "A Systematic Classification for the Birds of the World, Revised and Amended" (1934).)

STRUTHIONIFORMES

STRUTHIONIDAE
Struthio, MORPH., 7031

RHEIFORMES

RHEIDAE
Rhea, MORPH., 7931, 11390

CASUARIIFORMES

CASUARIIDAE
Casuarius, MORPH., 7931

SPHENISCIFORMES

SPHENISCIDAE
Eudyptes, DIST., L. H., MORPH., 10641; TAX., 7001

GAVIIFORMES

GAVIIDAE
Gavia, L. H., 9064

COLYMBIFORMES (PODICIPEDIFORMES)

COLYMBIDAE (PODICIPEDIDAE)
L. H., 8844
Colymbus, DIST., 8844; L. H., 8844, 9064
Podiceps, L. H., 5171

PROCELLARIIFORMES

Thalassidromidae, TAX., 5182

DIOMEDEIDAE
Diomedea, DIST., 10646; L. H., 9064, 10646; MORPH., 4369

PROCELLARIIDAE
Fulmarus, L. H., 18084
Pachyptila, MORPH., 5183
Petrodroma, DIST., 5186
Puffinus, DIST., 16090; EMB., 4384; L. H., 9064

HYDROBATIDAE
Oceanodroma, DIST., 5188

PELECANIFORMES

PHAETHONTIDAE
aethon, DIST., 7007

PELECANIDAE
elecanus, MORPH., 5196

SULIDAE
ula, L. H., 163; L. H., 168, 169; TAX., 1651

PHALACROCORACIDAE
halacrocorax, L. H., 5201

ANHINGIDAE
nhinga, DIST., TAX., 7022

CICONIIFORMES

ARDEIDAE
rdea, DIST., 5191, 14296, 14305; HIST., 4859; L. H., 9064, 14305
otaurus, L. H., 5179

THRESKIORNITHIDAE
jaia, L. H., 9064

ANSERIFORMES

L. H., 14301, 14802

ANATIDAE
L. H., 8841, 8844
Anser, L. H., 9064
Arctonetta, DIST., 1644
Branta, DIST., 16088; L. H., 9064
Cygnus, DIST., 16088; L. H., 9064; MORPH., 705
Mareca, L. H., 9064
Mergus, DIST., L. H., 5205
Nettion, L. H., 9064
Nyroca, DIST., 9068
Philacte, L. H., 9064
Querquedula, L. H., 10815
Somateria, L. H., 8844

FALCONIFORMES

ACCIPITRIDAE
Accipiter, DIST., 14296, 14306; TAX., 14306
Buteo, L. H., 9064, 14812
Circus, DIST., L. H., 14292
Haliaeetus, DIST., 8828; L. H., 9064
Rostrhamus, L. H., 9064
Urubitinga, L. H., 9064

FALCONIDAE
Falco, DIST., 8853, 14296; L. H., 9064
Herpetotheres, TAX., 1651

GALLIFORMES

DIST., L. H., TAX., 8851

MEGAPODIIDAE
Leipoa, L. H., 18071
Megapodius, TAX., 7014

CRACIDAE
Ortalis, L. H., 9064

TETRAONIDAE
Bonasa, L. H., 8589, 14435, 14436
Canachites, TAX., 16105
Centrocercus, L. H., 9067
Lagopus, DIST., TAX., 8851; L.H., 8858, 14299
Falcipennis, TAX., 16105

PHASIANIDAE
Afropavo, TAX., 6941
Colinus, L. H., 5880, 9064, 9066
Coturnix, DIST., 5186
Gallus, CYT., 7111; EMB., 699, 738, 4877, 4880, 5945, 5954, 5958, 7984, 8036, 8050, 8052, 9759, 9760, 9762, 9770, 11442, 11443, 13323, 13331, 13332, 15072, 15073, 15080, 17047, 17048; HIST., 656, 5885; MORPH., 757, 759, 5914, 7984, 16974
Lophophorus, TAX., 16077
METALLOPHASIS, N. SUBG., 16077
Lophortyx, L. H., 1878, 10818
Perdix, L. H., 164
Phasianus, L. H., 1879, 14436
Synoicus, DIST., 5186

GRUIFORMES

TURNICIDAE
Turnix, TAX., 7015

RALLIDAE
L. H., 8841
Amaurornis, DIST., MORPH., 7022
Coturnicops, DIST., 18059
Megacrex, DIST., TAX., 7022
Rallus, TAX., 7016

OTIDIDAE
Heterotetrax, DIST., TAX., 7023

CHARADRIIFORMES

JACANIDAE
Jacana, TAX., 1651

CHARADRIIDAE
Anarhynchus, DIST., L. H., 5192
Charadrius, TAX., 7015
Chettusia, DIST., L. H., 16073
Squatarola, DIST., L. H., 16073
Thinornis, DIST., 18060
Vanellus, L. H., 9064

SCOLOPACIDAE
L. H., 8841
Actitis, L. H., 10644
Capella, L. H., 10644, 16073
Numenius, DIST., L. H., 16073
Phaeopus, L. H., 9064
Tringa, DIST., 16073

LARIDAE
Chlidonias, DIST., 14300
Larus, EMB., 4383
Sterna, DIST., 8850; EMB., 4383; L. H., 5413, 8850, 14307; TAX., 7017

ALCIDAE
Aethia, L. H., 9064
Endomychura, DIST., TAX., 5176

COLUMBIFORMES

COLUMBIDAE
Columba, L. H., 9064
Ectopistes, L. H., 9064
Geopelia, DIST., TAX., 7022
Leptotila, L. H., 9064
Ptilinopus, DIST., TAX., 7022
Streptopelia, DIST., L. H., 8848

PSITTACIFORMES

PSITTACIDAE
Conuropsis, L. H., 9064
Purpureicephalus, DIST., MORPH., TAX., 5199
Rhynchopsitta, L. H., 9064

CUCULIFORMES

CUCULIDAE
L. H., 8841
Coccyzus, L. H., 9064
Cuculus, L. H., 9064

STRIGIFORMES

TYTONIDAE
Tyto, DIST., 14296

STRIGIDAE
Bubo, DIST., 8853
Cryptoglaux, L. H., 5198
Glaucidium, MORPH., 7035
Otus, DIST., 10651; TAX., 10651, 18061
Strix, DIST., 14296; L. H., 8586; MORPH., 4328

CAPRIMULGIFORMES

CAPRIMULGIDAE
Nyctidromus, L. H., 9064

MICROPODIFORMES

MICROPODIDAE
Apus, DIST., 14296

TROCHILIDAE
Cynanthus, L. H., 9064
Eugenes, L. H., [illegible]
Hylocharis, L. H., 9064
Lampornis, L. H., 9064
Selasphorus, L. H., 5193

TROGONIFORMES

TROGONIDAE
Pharomachrus, L. H., TAX., 16068
Trogon, L. H., 9064

CORACIIFORMES

ALCEDINIDAE
Alcedo, DIST., 14296
Ceryle, MORPH., 9775
Halcyon, TAX., 7018
Megaceryle, L. H., 170, 10652
Sauromarptis, DIST., TAX., 7022
Syma, DIST., TAX., 7022

PICIFORMES

CAPITONIDAE
Cyanops, DIST., TAX., 10638

PICIDAE
Campephilus, L. H., 9064, 12437
Ceophloeus, L. H., 12437
Dryobates, DIST., 7026, 8827; L. H., 7026, 12437; TAX., 8827
Sphyrapicus, L. H., 12437

PASSERIFORMES

TAX., 18065, 18073

TYRANNIDAE
Cnemotriccus, DIST., TAX., 7036
Empidonax, L. H., 9064
Mitrephanes, DIST., 7036
Myiarchus, DIST., TAX., 7036; L. H., 9064
Myiodynastes, L. H., 9064

MENURIDAE
Menura, L. H., TAX., 16084

ALAUDIDAE
Anacorys, DIST., TAX., 7023; L. H., 5197
Calendulauda, DIST., TAX., 7023
Chersomanes, DIST., TAX., 7023
Pseudammomanes, DIST., TAX., 7023

HIRUNDINIDAE
DIST., L. H., 8831
Hirundo, DIST., 5207, 8845, 14296; L. H., 16074; TAX., 8845
Petrochelidon, TAX., 1649

DICRURIDAE
Dicrurus, DIST., MORPH., 7022

CORVIDAE
Aphelocoma, TAX., 16100
Corvus, DIST., 14296
Garrulus, DIST., 14296
Pica, DIST., 8897, 14296; TAX., 8837
Xanthoura, L. H., 9064

PARADISEIDAE
Ailuroedus, DIST., L. H., 5185
Cicinnurus, L. H., 7022
Manucodia, L. H., 7022

PARIDAE
Parus, DIST., 14296
Psaltriparus, TAX., 1650

SITTIDAE
Sitta, L. H., 7021; TAX., 1642

TIMELIIDAE
Aethocichla, DIST., TAX., 7023
Crateroscelis, DIST., 7022
ELOCINCLA, 10647
Napothera, DIST., TAX., 10688
Psophodes, L. H., MORPH., 14298

PYCNONOTIDAE
Iole, DIST., TAX., 10647

TROGLODYTIDAE
Troglodytes, DIST., 14296

MIMIDAE
Mimus, DIST., 5178
Toxostoma, L. H., 9064

TURDIDAE
DIST., 8831; L. H., 8831, 8841
Erithacus, DIST., 14296
Hylocichla, DIST., L. H., TAX., 8852
Karrucincla, DIST., TAX., 7023
Luscinia, DIST., 14296; L. H., 7008
Oenanthe, DIST., 14296; L. H., 9064
Oreocincla, L. H., 8827
Phoenicuroides, DIST., TAX., 7023
Phoenicurus, DIST., 14296
Saxicola, DIST., 14296
Sialia, L. H., 9064
Turdus, DIST., 8835, 14296; L. H., 8827, 8835, 8841

SYLVIIDAE
Acanthiza, DIST., PHYL., TAX., 5184
Apalis, TAX., 5197
Cisticola, L. H., 5170
Malurus, DIST., L. H., TAX., 10653
Megalurus, DIST., 7022
Phylloscopus, DIST., TAX., 18081

REGULIDAE
Lophobasileus, DIST., TAX., 8845

MUSCICAPIDAE
Myiagra, DIST., MORPH., 7022
Petroica, TAX., 7013
Rhipidura, DIST., 7022

PRUNELLIDAE
Prunella, DIST., 14296

MOTACILLIDAE
DIST., L. H., 8831
Anthus, DIST., 7031, 14296; L. H., 7031
Motacilla, DIST., 14296

LANIIDAE
Pachycephala, TAX., 7013

PRIONOPIDAE
Myiolestes, DIST., 7022

STURNIDAE
Sturnuc, DIST., 14296

MELITHREPTIDAE
Meliphaga, DIST., 14294
Myzomela, DIST., L. H., 5169, 5187
Philemon, DIST., L. H., TAX., 10643

NECTARINIIDAE
Anthreptes, L. H., 5195
Arachnothera, DIST., TAX., 10647

VIREONIDAE
Vireo, TAX., 1642

COMPSOTHLYPIDAE
Protonotaria, L. H., 7032
Vermivora, L. H., 1640

PLOCEIDAE
Euplectes, L. H., 165
Passer, CYT., 10723; DIST., TAX., 8845; L. H., 8839
Petronia, DIST., TAX., 8845

ICTERIDAE
Agelaius, TAX., 1641

THRAUPIDAE
Piranga, TAX., 1653

FRINGILLIDAE
DIST., L. H., 8831
Aimophila, L. H., 9064
Carduelis, DIST., 14296
Chloris, DIST., 8846, 14296; L. H., 8846
Fringilla, DIST., 14296; L. H., 8841
Fringillaria, DIST., TAX., 7023
Leucosticte, DIST., 5207
Loxia, DIST., L. R., 8829
Melospiza, L. H., 8840
Passerculus, L. H., 9064; TAX. 16072
Pyrrhula, DIST., 14296
Serinus, DIST., TAX., 7023

INCERTAF SEDIS
(In Passeriformes)
Crithagra, DIST., TAX., 7028
Drymodyta, DIST., TAX., 7023

MAMMALIA

DIST., 5212, (E) 5225, (†) 5241, 5242, 7050; EMB., 9764, 11378, 15079; HIST., 5890, 11421, 15040, 16986; L. H., 166, 5212, 5242, 7038; MORPH., 2435, 4311, 4312, 4326, 4338, (Ter) 5241, 5906, 7929, 7940, 7942, 9678, 11378, 13294, 13307, 15011, 15013, 15032, PHYL., 367, 5061, 5249; TAX., (E) 5225, 18091

(Arrangement of orders and families, in the main, according to *Simpson*, "A New Classification of Mammals" (1931). In the rodentia, families and genera are arranged according to Miller and Gidley, "Synopsis of the *Supergeneric Groups* of Rodentia" (1918).)

MONOTREMATA

TACHYGLOSSIDAE
Echidna, MORPH., 16973
Tachyglossus, MORPH., 7979
Zaglossus, MORPH., 7979

ORNITHORHYNCHIDAE
Ornithorhynchus, MORPH., 7979

MULTITUBERCULATA

TAENIOLABIDIDAE
Catopsalis, TAX., (E) 18094

MARSUPIALIA

DIDELPHIIDAE
Coöna, DIST., TAX., (E) 7054
Didelphis, DIST., 5219, 14312; EMB., 5951, 15071; HIST., 4823; MORPH., 2425, 4823, 11407, 11408, 11409, 16969
Marmosa, MORPH., 2425
Dasyurus, CYT., 1719

INSECTIVORA

SOLENODONTIDAE
Solenodon, MORPH., PHYL., 7051

CHRYSOCHLORIDAE
Chrysochloris, MORPH., 4360

LEPTICTIDAE
Metacodon, TAX., (E) 5216

SORICIDAE
Blarina, MORPH., 4844, 14312
Cryptotis, DIST., 5243; L. H., 5222, 5240
Microsorex, DIST., 5240; MORPH., 14312
Notiosorex, DIST., 7038
Sorex, DIST., 5222, 7038, 8855, 14312; MORPH., 4844; TAX., 8855, 12457, 18088

TALPIDAE
Parascalops, DIST., 5222; L. H., 12446
Scalopus, TAX., 18100
Talpa, MORPH., 4810

MACROSCELIDIDAE
Nasilio, MORPH., [illegible]

PANTOLESTIDAE
Aphronorus, DIST., TAX., (E) 5225

CHIROPTERA

EMB., 13328; MORPH., 16108

PTEROPODIDAE
Cynopterus, L. H., 14308

PHYLLOSTOMATIDAE
STURNIROPS, 7041
Uroderma, L. H., 14308

CHILONYCTERIDAE
Chilonycteris, TAX., 12455

VESPERTILIONIDAE
Antrozous, DIST., 5222
Corynorhinus, DIST., 5222; L.H., 5219
Dasypterus, L. H., 7038
Eptesicus, L. H., 5244
Euderma, DIST., 7038
Kerivoula, L. H., 14308
Lasiurus, DIST., 5222; L. H., 5222, 7038; TAX., 18105
Myotis, DIST., 5240, 12458; L. H., 5219, 5244, 12458
Nycticeius, DIST., 7036; TAX., 18105
Pipistrellus, DIST., 5222, 5230; L. H., 5222, 7038

MOLOSSIDAE
Tadarida, DIST., 5219, 5280, 18105; L. H., 7038, 14312

INCERTAE SEDIS
(In Chiroptera)
Aethalops, DIST., TAX., 5209
Tylonycteris, L. H., 14308

PRIMATES

MORPH., 676, 695, 4376, 8012, 11433, 15017

CEBIDAE
Cebus, MORPH., 677, 11402

CERCOPITHECIDAE
Macaca, L. H., 5232; MORPH., 678, 4309, 11401, 15018, 16970, 16975
Rhesus, HIST., 2438
Simia, MORPH., 8007

PONGIDAE
Pan, MORPH., 685, 686, 4884
Pongo, MORPH., 685, 686, 11402

HOMINIDAE
Homo, CYT., 57, 1727, 2449, 11418; EMB., 689, 780, 4317, 4882, 15064, 15066, 17036; HIST., 672, 691, 2428, 4389, 5892; MORPH., 668, 669, 674, 677, 680, 681, 682, 684, 687, 706, 707, 708, 709, 2443, 4316, 4330, 5892, 7933, 7938, 7956, 7976, 7985, 9688, *9689, 9706, 11393, 11394*, 11399, 11402, 13292, 13293, 13296, 13297, 13300, 13301, 15015, 15033

TAENIODONTA

CONORYCTELLA, *(E)* 18094

EDENTATA

NEGATHERIIDAE
Nothrotherium, L. H., 7048

MYRMECOPHAGIDAE
Myrmecophaga, EMB., 17045

DASYPODIDAE
Dasypus, TAX., 18099

LAGOMORPHA

OCHOTONIDAE
Ochotona, TAX., 12441

LEPORIDAE
DICEA, (N) 14311
Hypolagus, DIST., TAX., (N) 14311
Lepus, CYT., 2448; EMB., 787, 5957, 17052; HIST., 2426, 2427, 2430, 4319, 11417, 13305; L. H., 5240, 14465; MORPH., 676, 4315, 7961, 7971, 9684, 13298, 13306, 15008, 16106
PEDIOLAGUS, (N) 14311
PRATILEPUS, (N) 14311
Sylvilagus, DIST., 10655; L. H., 14312; TAX., 10655, 18100

RODENTIA

DIST., 7050, (N) 7057; HIST., 693; PHYL., (N) 7057; TAX., (N) 7056, (N) 7057; SELEVINIIDAE, N. FAM., 12442

SELEVINIIDAE
SELEVINIA, 12442

SCIURIDAE
L. H., 5280
Citellus, EMB., 4381; L. H., 7038, 12445; TAX., 10659
Cynomys, DIST., 5252
Eutamias, L. H., 14312
Marmota, DIST., L. H., 5258; MORPH., 16106
Sciurus, DIST., 5243; L. H., 10827; MORPH., 16106
Tamias, DIST., 14310; L. H. 7038, 10654
Tamiasciurus, DIST., 5243; L.H., 14312

GEOMYIDAE
L. H., 14309
Geomys, DIST., 3492, 10657 TAX., 5221, 10657
Heterogeomys, DIST., TAX., 10662
Pappogeomys, DIST., TAX., 7040
Platygeomys, DIST., TAX., 7039
Thomomys, TAX., 14309

HETEROMYIDAE
Dipodomys, MORPH., 4853; TAX., 18096
Heliscomys, MORPH., TAX., (E) 18103
Liomys, DIST., TAX., 7042
Perognathus, DIST., 1654, 5229, 10656; L. H., 18086; TAX., 5229, 10656, 14312, 18096, 18102, 18103

CASTORIDAE
Castor, DIST., 12448; L. H., 8534, 10819; MORPH., 16016; TAX., 10659

CRICETIDAE
Clethrionomys, DIST., 5243
Cricetus, TAX., 12453
Dicrostonyx, DIST., MORPH. 10667; TAX., 10667
Evotomys, CYT., 7121
Hodomys, TAX., 8864
Lemmus, L. H., 3202
Microtus, CYT., 7121; DIST. 5227, 5228, 5280; L. H. 3202; MORPH., 5240; TAX. 5227, 5228
Neotoma, DIST., 5219, 8857 18105; L. H., 5236; TAX. 8857, 18096
Ondatra, DIST., 5243, 14312 L. H., 12684; MORPH. 14312
Onychomys, TAX., 18096
Peromyscus, CYT., 1717; DIST. 5219, 5248, 5254, 7042 8860, 8861 10664, 14312, L. H., 6215, 14812 MORPH., 8860, 8861 10664; TAX., 5208, 7042 7056, 10659, 18096, 18100 18101
Pitymys, DIST., 5281, 18105 L. H., 5281
Reithrodontomys, L. H., 8860 14312; TAX., 18096
Synaptomys, DIST., 5240, 5254 14312

MURIDAE
EMB., 5950, 5957, 8048 15061, 17058; HIST., 2439, 2440, 2441, 4852, 7965, 7967, 9696, 11883, 11884

11898, 15021, 15023, 15025, 16989, 16990; **MORPH.**, 4329, 4351, 7974, 7975, 7981, 9692, 9693, 9694, 9697, 9698, 9699, 11388, 13302, 13308, *14998*, *16966*, *16980*, 16995
Apodemus, **CYT.**, 7121
Conilurus, **DIST.**, **TAX.**, 7055
Epimys, **CYT.**, 2447
GONIODONTOMYS, (N) 7056
Leptomys, **DIST.**, **TAX.**, 7055
Mastomys, **DIST.**, **TAX.**, 10666
Mus, **CYT.**, 7110, 7945, 16987; **EMB.**, 734, 8037, 8058, 15062; **MORPH.**, 15019
Rattus, **CYT.**, 55

ZAPODIDAE
Napaeozapus, **DIST.**, 5222, 5230, 5243, 5251; **L. H.**, 5251
Zapus, **DIST.**, **L. H.** 5250

HYSTRICIDAE
Thecurus, **TAX.**, 12456

ERETHIZONTIDAE
Erethizon, **DIST.**, 5240, 12443

CAVIIDAE
Cavia, **CYT.**, 1716; **EMB.**, 2466, 8037, 8043, 8048, 17038; **HIST.**, 394, 5897, 7970, 11414; **MORPH.**, 4321, 4325, 9697, 13299, 13308, *13312*, *14996*, *15006*

CARNIVORA

MORPH., 13286

CREODONTA

OXYAENIDAE
SARKASTODON, (E) 7043

INCERTAE SEDIS
(In Creodonta)
Ellipsodon, **TAX.**, (E) 18094

FISSIPEDIA

CANIDAE
CYT., 1715, 3453; **HIST.**, 4358
Canis, **DIST.**, 5223, 18085; **EMB.**, 4379; **HIST.**, 2450, 7939, 7968, 11385, 15024; **L. H.**, 5223, 10826, 14426; **MORPH.**, 671, *676*, *2436*, 4314, 4341, 5894, 7952, 11400, 13295, 13298, 15008, 16995; **TAX.**, 18085
Vulpes, **DIST.**, 5223; **L. H.**, 5223, 10822; **TAX.**, 5218
Urocyon, **DIST.**, **TAX.**, 7042, *10661*; **L. H.**, *5240*, *10822*, 14312

PROCYONIDAE
Potos, **DIST.**, **TAX.**, 7042
Procyon, **MORPH.**, 4354

URSIDAE
Ailuropus, **DIST.**, **L. H.**, 5223
Ailurus, **DIST.**, **L. H.**, *5223*
Selenarctos, **DIST.**, **L. H.**, 5223
Thalarctos, **DIST.**, 14312
Ursus, **DIST.**, 5219, 5223; **L. H.**, 5223; **TAX.**, 5218

MUSTELIDAE
Enhydra, **DIST.**, **L. H.**, 5224
Mephitis, **DIST.**, 14312; **L. H.**, 5240, 14312, 14424
Mustela, **CYT.**, 59; **DIST.**, 5243; **EMB.**, 732; **L. H.**, 5222, 5230, 14312
Spilogale, **DIST.**, **TAX.**, 8856
Taxidea, **TAX.**, 18095

FELIDAE
Felis, **DIST.**, 5219; **EMB.**, 15061; **HIST.**, 15028; **MORPH.**, 676, 710, 2436, 7953, 7960, 9687, 9689, 11391, 11392, 13295, 14999, 15020, 16976, *16979*, *16993*
Lynx, **L. H.**, 10821

PINNIPEDIA

OTARIIDAE
Zalophus, **DIST.**, 18093

PHOCIDAE
Halichoerus, **DIST.**, **L. H.**, 5247
Lobodon, **DIST.**, **L. H.**, **MORPH.**, 7049
Phoca, **DIST.**, 5247

CETACEA

MORPH., 675, 4338; **PHYL.**, **TAX.**, 5235

ZIPHIIDAE
Mesoplodon, **L. H.**, 14312

DELPHINIDAE
Pseudorca, **MORPH.**, 8859

PHYSETERIDAE
Physeter, **L. H.**, 1658

BALAENOPTERIDAE
Balaenoptera, **L. H.**, **TAX.**, 1660; **MORPH.**, **TAX.**, 12444
Megaptera, **L. H.**, **TAX.**, 1657

BALAENIDAE
Eubalaena, **L. H.**, **MORPH.**, 1659

INCERTAE SEDIS
(In Cetacea)
PLATYOSPHYS, 5235

CONDYLARTHRA

DRACOCLAENUS, (E) 18094
JEPSENIA, (E) 18094

TUBULIDENTATA

ORYCTEROPODIDAE
Orycteropus, **MORPH.**, 5238

AMBLYPODA

PERIPTYCHIDAE
Anisonchus, **TAX.**, (E) 18094
Haploconus, **TAX.**, (E) 18094
Periptychus, **DIST.**, **TAX.**, (E) 5225

PROBOSCIDEA

MASTODONTIDAE
Mammut, **DIST.**, 12443
Mastodon, **DIST.**, 12450

ELEPHANTIDAE
Elephas, **DIST.**, **TAX.**, (†) 5210 **MORPH.**, 4322, (†) 5210, 5947, 5948, 15026

HYRACOIDEA

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